What is claimed is:

1. A method for forming electrically conductive impregnated fibers, comprising the steps of:

(a) feeding electrically conductive fibers into a bath containing an organic wetting agent to impregnate the fibers with the organic wetting agent forming an impregnated fiber tow, the applied organic wetting agent being at least 10 percent by weight of the resulting impregnated fiber tow; and

(b) applying a thermoplastic or thermoset sheath onto the impregnated fiber tow to form a sheathed, impregnated fiber tow.

2. The method according to claim 1, further comprising the step of:

(c) cutting the sheathed impregnated fiber tow into pellets.

3. The method according to claim 2, further comprising the steps of:

(d) introducing the pellets into a mold; and

(e) melting the pellets in the mold to form an electro-magnetic shielding composite, wherein the organic wetting agent enables the even distribution of the fibers in the composite.

4. The method according to claim 1, further comprising, prior to step (a), the steps of:

(i) feeding out non-electrically conductive fibers; and

(ii) applying an electrically conductive coating to the non-electrically conductive fibers.

5. The method according to claim 4, wherein step (a)(ii) applying the electrically conductive coating, comprises electroplating non-electrically conductive carbon fibers with a metal coating.

6. The method according to claim 1, wherein step (a) is performed in-line.

7. The method according to claim 1, wherein the electrically conductive fibers of step (a) are fed out at a speed of less than about 150 feet/min.

8. The method according to claim 1, wherein impregnation step (a) comprises pulling the electrically conductive fibers through a bath containing the organic wetting agent.

9. The method according to claim 1, wherein the organic wetting agent is selected from the group consisting of coupling agents, film formers and mixtures thereof.

10. The method according to claim 9, wherein the organic wetting agent includes a film former selected from the group consisting of waxes, polyethylene glycols, polypropylene glycols, polycaprolactones, glycidyl ethers, epoxy resins, urethanes, polyester alkyds, amic acid, propylene glycol fumarate, propoxylated bisphenol-A-maleate, propoxylated allyl alcohol-maleate, polyvinyl acetates, olefins, low molecular weight polyesters and mixtures thereof, wherein the film former is capable of coating the individual electrically conductive fibers to form an impregnated tow.

11. The method according to claim 9, wherein the organic wetting agent includes a coupling agent selected from the group consisting of alcohols, amines, esters, ethers, hydrocarbons, siloxanes, silazanes, silanes, lactams, lactones, anhydrides, carbenes, nitrenes,

orthoesters, imides, enamines, imines, amides, imides, functionalized olefins and mixtures thereof, wherein the coupling agent is capable of bonding the conductive fibers to the thermoplastic or thermoset sheath at a temperature ranging from about 100 to about 300 °C.

12. The method according to claim 8, wherein the bath is an aqueous emulsion of the wetting agent.

13. The method according to claim 1, wherein the impregnation step (a) comprises pulling the electrically conductive fiber through a nonaqueous bath containing the organic wetting agent and directly feeding the impregnated fiber tow to sheathing step (b).

14. The method according to claim 1, wherein the sheathing of the impregnated fiber tow is performed in-line with the impregnation step (a).

15. The method according to claim 2, wherein prior to cutting step (c) the sheathed electrically conductive fiber tow is wound into a package.

16. The method according to claim 2, wherein cutting step (c) is performed in-line with the sheathing of the impregnated fiber tow.

17. The method according to claim 2, wherein cutting step (c) comprises cutting the fiber tow into pellets having a length ranging from about 6 mm to about 13 mm.

18. The method according to claim 2, wherein the electrically conductive fiber tow is substantially on an axis of the pellet and extends the length of the pellet.

19. The method according to claim 1, wherein the organic wetting agent forms between 10 and 30 percent by weight of the impregnated fiber tow.

20. The method according to claim 1, wherein the organic wetting agent forms between 15 and 25 percent by weight of the impregnated fiber tow.

21. A method for forming an electrically conductive impregnated fiber pellet, comprising the steps of:

(a) feeding out electrically conductive fibers;

(b) pulling the electrically conductive fibers through a bath containing an aqueous emulsion of about 35-65 weight percent wax such that the wax impregnates the conductive fibers to form an impregnated tow, wherein the wax is present on the fibers in an amount ranging from about 10 to about 30 percent by weight of the resulting impregnated fiber tow;

(c) applying a thermoplastic or thermoset sheath onto the impregnated fiber tow; and

(d) cutting the impregnated fiber tow into pellets having a length of from about 6 to about 13 mm.

22. The method according to claim 21, wherein the sheath is a thermoplastic selected from the group consisting of polycarbonate resin, nylon, polybutylene terephthalate, polyethylene terephthalate, polystyrene, polypropylene, acrylontrile butadiene styrene, polyphenylene sulfide, polyether ether ketone, polyether imide, thermoplastic olefins, elastomers, and mixtures thereof, and the conductive fibers are present in the pellets in an amount of less than about 25 weight percent.

23. The method according to claim 1 wherein the impregnated fiber tow is pre-heated immediately prior to sheathing to facilitate impregnation by the sheath material.

24. The method according to claim 23 wherein the impregnated fiber tow is pre-heated using resistive heating.

25. A method of making an electrically conductive strand material for the manufacture of a composite article, said article comprising a matrix material, said method comprising:

applying a composition comprising an organic wetting agent, or a thermoplastic or thermosetting polymer or precursor thereof, in an amount sufficient to coat substantially all of a plurality of fibers comprising electrically conductive fibers to form preimpregnated fibers;

gathering the preimpregnated fibers into a preimpregnated strand having the composition disposed between substantially all of the plurality of fibers; and encasing the preimpregnated strand with a thermoplastic or thermoset material to form an encased composite strand.

26. A method according to claim 25, wherein the step of applying the composition comprises:

(a) feeding the electrically conductive fibers into a bath containing an organic wetting agent to impregnate the fibers with the organic wetting agent forming an impregnated fiber tow, the applied organic wetting agent being at least 10 percent by weight of the resulting impregnated fiber tow; and

(b) applying the thermoplastic material onto the impregnated fiber tow to form a sheathed, impregnated fiber tow.

27. The method according to claim 26, further comprising, prior to step (a), the steps of:

(i) feeding out non-electrically conductive fibers; and

(ii) applying an electrically conductive coating to the non-electrically conductive fibers.

28. The method according to claim 27, wherein the step of applying the electrically conductive coating comprises electroplating non-electrically conductive carbon fibers with a metal coating.

29. The method according to claim 25, wherein the coating comprises an organic material having a viscosity, at a temperature range of 80 °C - 180 °C, no greater that 1500 cps.

30. The method of claim 29 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 800 cps.

31. The method of claim 29 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 400 cps.

32. The method of claim 29 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 200 cps.

33. The method of claim 29 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 75 cps.

34. The method of claim 29 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 25 cps.

35. The method of claim 29 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 5 cps.